



Faculty of Engineering

School of Minerals and Energy Resources Engineering

Undergraduate Course Outline

MINE4260

Coal Mine Design and Feasibility Project

Professor Serkan Saydam

## CONTENTS

|   |                         |
|---|-------------------------|
| 1. INFORMATION ABOUT THE COURSE.....                    | 3                       |
| 1.1. Course Description.....                            | 3                       |
| 1.2. Course Completion.....                             | 3                       |
| 1.3. Assumed Knowledge.....                             | 3                       |
| 2. AIMS, LEARNING OUTCOMES AND GRADUATE ATTRIBUTES..... | 4                       |
| 2.1. Course Aims.....                                   | 4                       |
| 2.2. Learning Outcomes.....                             | 4                       |
| 3. REFERENCE RESOURCES.....                             | 4                       |
| 3.1. Reference Materials.....                           | 4                       |
| 3.2. Recommended Materials.....                         | 5                       |
| 3.3. Other Resources.....                               | 5                       |
| 3.4. Online Resources.....                              | 5                       |
| 3.5. Software and Hardware.....                         | 6                       |
| 3.6. Report Writing Guide.....                          | 6                       |
| .....   | (e)ITJ.O.T.c.O.506(4)Tt |

## 1. INFORMATION ABOUT THE COURSE

|              |                                    |       |          |        |    |               |       |
|--------------|------------------------------------|-------|----------|--------|----|---------------|-------|
| Course Code: | MINE8850                           | Term: | T2, 2020 | Level: | UG | Units/Credits | 6 UOC |
| Course Name: | <b>Mine Design and Feasibility</b> |       |          |        |    |               |       |

|                  |  |        |                      |  |  |  |  |
|------------------|--|--------|----------------------|--|--|--|--|
| Course Convenor: | <b>Professor Serkan Saydam</b>   |        |                      |  |  |  |  |
| Contact Details  | School of Minerals and Energy<br>Resources Engineering<br>Old Main Building, Rm 159H   | EMAIL: | s.saydam@unsw.edu.au |  |  |  |  |
|                  |  | Phone: | +61 2 9385 4525      |  |  |  |  |
| Contact times    | <b>This course will be delivered online in T2.</b><br>Mon 14:00-17:00, Location: Online, Weeks: 1-5,7-10<br>Tue 12:00-14:00, Location: Online, Weeks: 1-5,7-10 |        |                      |  |  |  |  |

### 1.1. Course Description

In this course a potential coal project will be evaluated from the prospective of open cut and underground mining. The course will integrate the technical, economic, and management content presented earlier in the mining engineering program in the design and evaluation of a new mining project while taking account of industry standards, community expectations and government requirements. Technical design, project evaluation and assessment of the socio-political impacts of the

## 2. AIMS, LEARNING OUTCOMES AND GRADUATE ATTRIBUTES

### 2.1. Course Aims

The aim of this course is to assist students carry out a pre-feasibility study on a coal deposit incorporating:

- x Reserve estimation,
- x Mining method selection,
- x Mine design and optimisation,
- x Development and production planning/scheduling,
- x Equipment selection,
- x Geomechanics,
- x Ventilation,
- x Cost analysis,
- x M(,)TJ 0 Tdc 0 T(itc 0 Tw pu)-4 a



New postgraduate course students are strongly advised to visit the above website and complete the ELISE and ELISE Plus tutorials. These will help develop skills in finding, using and evaluating scholarly information.

Videos are often provided to students as a web stream within the Moodle learning management system. Videos are not available for download by students, unless approved by the Course Convenor and either the Undergraduate or Postgraduate Coursework Director. Special consideration can be provided for students to access videos off-line (eg. working remotely). Please contact the Course Convenor for more information. Note that UNSW reserves the right to deliver videos as a web stream rather than off-line and cannot provide videos that are copyright from other providers.

Remember, UNSW librarians are usually happy to help you locate articles or make suggestions regarding possible material to help you in your academic work. You can also access basic online help at <http://www.library.unsw.edu.au/>

### **3.5. Software and Hardware**

- x Vulcan, Minex, MS Excel, Talpac: All software will be accessed through myaccess.

### **3.6. Report Writing Guide**

The School has a [Report Writing Guide \(RWG\)](#). A copy of this is available on the course Moodle site.

## **4. COURSE CONTENT AND LEARNING ACTIVITIES**

### **4.1. Course content**

Presentations and reading material are provided to provide students with technical information and examples of how geology and geophysical information is used at various stages of mining. Discussions will be used to encourage students to articulate and defend positions, consider different points of view and evaluate evidence. Case studies will be used to provide practice in identifying potential problems and evaluating alternative course of actions.







- x **Contact Hours per Week:** Four contact hours to be utilised for Project Based Learning.
- x The above schedule is a guide only and the indicated dates when each theme and course content is discussed and subject to change without notice.



## 6. ASSESSMENT CRITERIA

The assessment criteria provides a framework for you to assess your own work before formally submitting major assignments to your course convenor. Your course convenor will be using this framework to assess your work and as a way to assess whether you have met the listed learning outcomes and the graduate attributes for your program. We ask that you don't use the assessment criteria guidelines as a checklist, but as a tool to assess the quality of your work. Your course convenor will also be looking at the quality, creativity and the presentation of your written assignment as they review the framework. Rubrics, wherever applicable, will be provided at the time of the assignment release.

## 7. STUDYING A UG COURSE IN UNSW MINERALS AND ENERGY RESOURCES ENGINEERING

### 7.1. How We Contact You

At times, the School or your course convenors may need to contact you about your course or your enrolment. Your course convenors will use the email function within Moodle or we will contact you on your @student.unsw.edu.au email address.

We understand that you may have an existing email account and would prefer for your UNSW emails to be redirected to your preferred account. Please see these instructions on how to redirect your UNSW emails: <https://www.it.unsw.edu.au/students/email/index.html>

### 7.2. How You Can Contact Us

We are always ready to assist you with your inquiries. To ensure your question is directed to the correct person, please use the email address below for:

Enrolment or other admin questions regarding your program:  
<https://unswinsight.microsoftcrmportals.com/web-forms/>

Course inquiries should be directed to the Course Convenor.

### 7.3. Computing Resources and Internet Access Requirements

UNSW Minerals and Energy Resources Engineering provides blended learning using the on-line Moodle LMS (L oswwwr01 (w)hB0.orSyionefB )10 ( )w 10.23 0 Td( 5.1-0.003 Tc 0.CID 18 >>BDC 0.6 (1 Tf-0- 5.1-TjEMC /P



## 7.8. Course Results

For details on UNSW assessment policy, please visit: [www.student.unsw.edu.au/assessment](http://www.student.unsw.edu.au/assessment)

In some instances your final course result may be withheld and not released on the UNSW planned date. This is indicated by a course grade result of either:

- x WD – which usually indicates you have not completed one or more items of assessment or there is an issue with one or more assignment; or
- x WC – which indicates you have applied for Special Consideration due to illness or misadventure and the course results have not been finalised.

In either event it would be your responsibility to contact the Course Convener as soon as practicable but no later than five (5) days after release of the course result. If you don't contact the convener on time, you may be required to re-submit an assignment or re-sit the final exam and may result in you failing the course. You would also have a NC (course not completed) mark on your transcript and would need to re-enroll in the course.

## 7.9. Students Needing Additional Support

Equitable Learning Services aims to provide all students with a free and confidential service that provides practical support to ensure that your health condition doesn't adversely affect your studies. <https://student.unsw.edu.au/els>

## 7.10. Academic Honesty and Plagiarism

Your lecturer and the University will expect your submitted assignments are truly your own work. UNSW has very clear guidelines on what plagiarism is and how to avoid it. Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. The University has adopted an educative approach to plagiarism and has developed a range of resources to support students. All the details on plagiarism, including some useful resources, can be found at [www.student.unsw.edu.au/plagiarism](http://www.student.unsw.edu.au/plagiarism).

All Mining Engineering students are required to complete a student declaration for academic integrity which is outlined in the assignment cover sheets. By signing this declaration, you agree that your work is your own original work.

If you need some additional support with your writing skills, please contact the Learning Centre or view some of the resources on their website: [www.lc.unsw.edu.au/](http://www.lc.unsw.edu.au/). The Learning Centre is designed to help you improve your academic writing and communication skills. Some students use the Centre services because they are finding their assignments a challenge, others because they want to improve an already successful academic performance.

## 7.11. Continual Course Improvement

At the end of each course, all students will have the opportunity to complete a course evaluation form. These anonymous surveys help us understand your views of the course, your lecturers and the course materials. We are continuously improving our courses based on student feedback, and your perspective is valuable.

Feedback is given via <https://student.unsw.edu.au/myexperience> and you will be notified when this is

available for you to complete.

We also encourage all students to share any feedback they have any time during the course – if you have a concern, please contact us immediately.

